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- E,  
(cont)
- a) obtaining a nucleic acid sample from an individual;
  - b) determining the nucleotide present at nucleotide position 29 of exon 10 of a glycerol kinase gene comprising SEQ ID NO: 5,
- wherein presence of a guanine at said position is predictive of diabetes mellitus in the individual as compared with an individual having an adenosine at said position.

Amendments to the claims are indicated in the attached "Marked Up Version of Amendments" (pages i - ii).

#### REMARKS

Claim 15 has been cancelled.

Claims 14, 17, 18 and 51-54 have been amended to clarify that the glycerol kinase gene comprises SEQ ID NO: 5. Support for this amendment can be found throughout the specification, for example, Figures 7A-D.

No new matter is added.

Applicants' attorney thanks the Examiner for clarifying the reason for non-entry of Applicants' first Amendment After Final filed on May 27, 2003 in a telephonic interview conducted with Vivien J. Tannoch-Magin on July 15, 2003.

#### Rejection of Claim 16 Under 35 U.S.C. § 112, First Paragraph

Claim 16 stands rejected under 35 U.S.C. § 112, first paragraph, because the Examiner states that the specification "while being enabling for assisting in the prediction type II diabetes, does not reasonably provide enablement for the prediction of type II diabetes" (Office Action, page 2).

Again, applicants thank the Examiner for clarifying this rejection in a telephonic interview on May 14, 2003, as being against Claim 15, not Claim 16. As noted above, Applicants have cancelled Claim 15, obviating the rejection.

#### Rejection of Claims 14-15, 17-18 and 51-54 Under 35 U.S.C. § 112, First Paragraph

Claims 14-15, 17-18 and 51-54 are rejected under 35 U.S.C. § 112, first paragraph, as "containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the invention" (Office Action, page 2).

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Specifically, the Examiner states that Applicants have no support for a genus claim drawn to a glycerol kinase gene.

Applicants have amended Claims 14, 17, 18 and 51-54 to clarify that the glycerol kinase gene recited in the claims is a glycerol kinase gene comprising SEQ ID NO: 5. Reconsideration and withdrawal of the rejection is respectfully requested.

CONCLUSION

In view of the above amendments and remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned at (978) 341-0036.

Respectfully submitted,

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MARKED UP VERSION OF AMENDMENTS

Claim Amendments Under 37 C.F.R. § 1.121(c)(1)(ii)

14. (Twice Amended) A method of predicting impaired glucose tolerance in an individual, comprising the steps of:
- a) obtaining a nucleic acid sample from an individual;
  - b) determining the nucleotide present at nucleotide position 29 of exon 10 of a glycerol kinase gene comprising SEQ ID NO: 5,
- wherein presence of a guanine at said position is predictive of impaired glucose tolerance in the individual as compared with an individual having an adenosine at said position.
17. (Twice Amended) A method of predicting hyperglycerolemia in an individual, comprising the steps of:
- a) obtaining a nucleic acid sample from an individual;
  - b) determining the nucleotide present at nucleotide position 29 of exon 10 of a glycerol kinase gene comprising SEQ ID NO: 5,
- wherein presence of a guanine at said position is predictive of hyperglycerolemia in the individual as compared with an individual having an adenosine at said position.
18. (Twice Amended) A method of assisting in the prediction of cardiovascular disease in an individual, comprising the steps of:
- a) obtaining a nucleic acid sample from an individual;
  - b) determining the nucleotide present at nucleotide position 29 of exon 10 of a glycerol kinase gene comprising SEQ ID NO: 5,
- wherein presence of a guanine at said position is predictive of cardiovascular disease in the individual as compared with an individual having an adenosine at said position.
51. (Amended) A method of assisting in the prediction of impaired glucose tolerance in an individual, comprising the steps of:
- a) obtaining a nucleic acid sample from an individual;
  - b) determining the nucleotide present at nucleotide position 29 of exon 10 of a glycerol kinase gene comprising SEQ ID NO: 5,

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wherein presence of a guanine at said position is predictive of impaired glucose tolerance in the individual as compared with an individual having an adenosine at said position.

52. (Amended) A method of assisting in the prediction of type 2 diabetes mellitus in an individual, comprising the steps of:
- a) obtaining a nucleic acid sample from an individual;
  - b) determining the nucleotide present at nucleotide position 29 of exon 10 of a glycerol kinase gene comprising SEQ ID NO: 5,
- wherein presence of a guanine at said position is predictive of type 2 diabetes mellitus in the individual as compared with an individual having an adenosine at said position.

53. (Amended) A method of assisting in the prediction of hyperglycerolemia in an individual, comprising the steps of:
- a) obtaining a nucleic acid sample from an individual;
  - b) determining the nucleotide present at nucleotide position 29 of exon 10 of a glycerol kinase gene comprising SEQ ID NO: 5,
- wherein presence of a guanine at said position is predictive of hyperglycerolemia in the individual as compared with an individual having an adenosine at said position.

54. (Amended) A method of assisting in the prediction of diabetes mellitus in an individual, comprising the steps of:
- a) obtaining a nucleic acid sample from an individual;
  - b) determining the nucleotide present at nucleotide position 29 of exon 10 of a glycerol kinase gene comprising SEQ ID NO: 5,
- wherein presence of a guanine at said position is predictive of diabetes mellitus in the individual as compared with an individual having an adenosine at said position.